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(54) Closure for tubular containers.

(57) the closure for tubular containers according to the invention is of the kind comprising a pan shaped lid (1) fitting on the inside of the container mouth (4) to be closed. According to the invention the border (3,23) of the mouth of the container (4) is formed with an internal thickening (2,20) extending on at least a portion of its contour, whereas the lid (1) has a side wall the outer surface of which fits with the thickening inner surface, a radial flange (5) extending outwards of its edge, intended to rest upon the edge (3a) of the container mouth, and a rim (6) extending outwardly about its bottom and having a saw tooth shaped cross section intended to be locked against the lower edge (7,22) of the border inner thickening, thus preventing an involuntary removal of the lid.

The inner thickening (2) of the container mouth opening may be formed by folding inwardly the border (3) onto itself, or by a hoop (20) formed with a channel shaped transverse cross section fitting on the border (23) of the container opening to be closed, such that the said border is trapped between the internal faces of the channeled hoop.

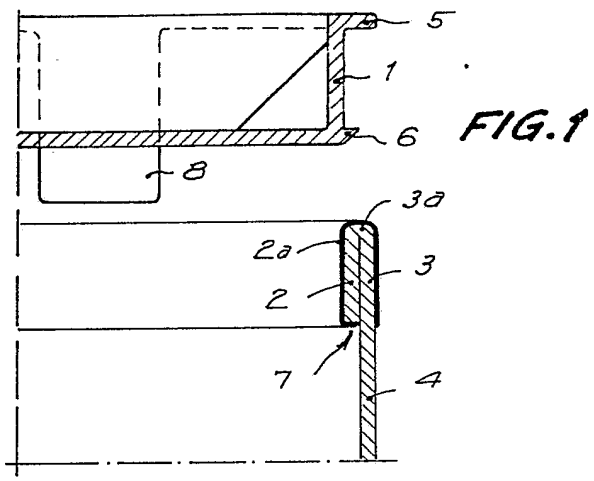

FIG.1

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Description

CLOSURE FOR TUBULAR CONTAINERS

The present invention relates to a closure for tubular containers such as cardboard or the like material barrels, which confers a very noticeable stiffness to the said containers.

BACKGROUND OF THE INVENTION

The use of cardboard, sheet wood and the like material tubular containers to condition powder, granulated or similar products, is very common in view of their very low cost, as is essential owing to their condition of single use containers.

The basic problem which this type of containers is subjected to is to provide them with a stiffness enough to withstand pressure and load under which they will be placed, as well as a safe and effective closure.

DESCRIPTION OF THE INVENTION

In accordance with these needs, the closure making the subject matter of the invention has been devised.

The closure device according to the invention is of the kind comprising a pan shaped lid fitting on the inside of the container mouth to be closed, and is featured in that the mouth border of the container is formed with an internal thickening extending on at least a portion of its contour, whereas the lid has a side wall the outer surface of which fits with the thickening inner surface, a radial flange extending outwards of its edge, intended to rest upon the edge of the container mouth, and a rim extending outwardly about its bottom and having a saw tooth shaped cross section intended to be locked against the lower edge of the border inner thickening, thus preventing an involuntary removal of the lid.

More specifically, the inner thickening of the container mouth opening is formed by folding inwardly the border onto itself. To advantage, the folded border of the container mouth has a hardening lining.

In an alternative embodiment, the inner thickening is constituted by a hoop formed with a channel shaped transverse cross section fitting on the border of the container opening to be closed, such that the said border is trapped between the internal faces of the channeled hoop. In this latter case, the channeled hoop may be secured to the container border by means of pressure fit or, as it is preferred, with the aid of conventional devices such as a series of staples or whatever other device.

In a preferred embodiment, the lid outer radial flange is provided with an extended lug forming a pull handle to enhance the lid removal.

To advantage, the edge of the hoop inner face forms an inclined surface in the manner of a saw tooth which is complementary to the rim of the lid which fits under pressure with the said edge.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of what is described in the present specification, a drawing is enclosed in which a practical embodiment of the closure is shown only by way of an example. In the said drawing:

Figure 1 is a view in diametral cross section of a part of the disassembled closure, in which the thickening is formed by folding the border of the container wall inwardly of the container;

Figure 2 is a view similar to Figure 1, with the thickening formed by an assembled channeled hoop;

Figure 3 is a view similar to Figure 1, with the closure being incorporated to the base of a tubular container;

Figure 4 is a view similar to Figure 2, with the closure being incorporated to the base of a tubular container;

Figure 5 is a lateral elevation view of the closure of Figures 1 and 3 as incorporated to a base of the container:

Figure 6 is a lateral elevation view of the closure of Figures 2 and 4 as incorporated to a base of the container, and

Figure 7 is an upper plan view of the lid.

DESCRIPTION OF A PREFERRED EMBODIMENT

The described closure consists, mainly with reference to Figures 1 and 3 of the drawing, of a lid 1 made of a pressed tray, to advantage of plastic material, the side walls of which are pressure fit, in the assembled position of Figure 3, on the inner contour of a thickening 2 formed by folding the border 3 of the tubular body 4, constituting the container, onto the inner face of the border itself, as it is seen in the Figures. The border of the tray 1 is formed with an outer radial flange 5 intended to rest onto the upper edge 3a of the so far formed thickening 2.

To advantage, the thickening 2 is provided with a hardening lining 2a in order to enhance its stiffness.

An outer radial rim 6 is formed about the bottom of the lid 1 and has a saw tooth shaped cross section, this rim being intended to make a pressure lock against the edge 7 of the thickening 2 of the container border 3, when in the closed position of Figure 3.

Furthermore, a lug 8 extends from the edge of the radial flange 5 to constitute a pull handle in the manner of a lever to facilitate removing the closure.

A further embodiment of the invention will now be

described with reference to the Figures 2, 4, 6 and 7 of the drawings. The construction of the lid of this embodiment is identical with the lid so far described with reference to the Figures 1 and 3, and thus it will not be described further and its parts will be given the same reference characters as previously used.

Referring now to Figures 2 and 4, the thickening 2 of the previous embodiment has been substituted by a hoop generally denoted with 20 and constituted of a circular profiled section of U shaped cross section, to advantage of a plastic material, with its inner face 21 having the edge 22 beveled in the manner of a saw tooth. This hoop 20 is intended to fit about the border 23 of the tubular container 4 to be closed. Connection of the hoop 20 to the border 23 is performed by means of staples 24 or other conventional means, even an adhesive.

As it appears form the above description and the consideration of the drawing, the closure in question gives an exceeding reinforcement to the container, thus ensuring its stiffness and ability for withstanding the weight and internal pressure due to the canned product.

On the other hand, the locking action of the lid 1 onto the thickening 20 or 20 through the fit of the rim 6 to the edge 7 or 22, prevents from an accidental moving apart of the lid once this has been fit in its closing position.

Aperture of the lid 1 is eventually performed by pulling the lug 8 in the manner of a lever, thus facilitating the disengagement of the rim 6 as regards the edge 7 or 22.

Claims

1. Closure for tubular containers, of the kind comprising a pan shaped lid (1) fitting on the inside of the container mouth (4) to be closed, characterized in that the mouth border (3,23) of the container (4) is formed with an internal thickening (2,20) extending on at least a portion of its contour, whereas the lid (1) has a side wall the outer surface of which fits with the thickening inner surface, a radial flange (5) extending outwards of its edge, intended to rest upon the edge (3a) of the container mouth. and a rim (6) extending outwardly about its bottom and having a saw tooth shaped cross section intended to be locked against the lower edge (7,22) of the border inner thickening, thus preventing an involuntary removal of the lid.

2. Closure for tubular containers, according to claim 1, characterized in that the inner thickening (2) of the container mouth opening is formed by folding inwardly the border (3) onto itself.

3. Closure for tubular containers, according to claims 1 and 2, characterized in that the folded border (2) of the container mouth has a hardening lining (2a).

4. Closure for tubular containers, according to claim 1, characterized in that the inner thickening is constituted by a hoop (20) formed with a channel shaped transverse cross section fitting on the border (23) of the container opening to be closed, such that the said border is trapped between the internal faces of the channeled hoop.

5. Closure for tubular containers, according to claims 1 and 4, characterized in that the channeled hoop (20) may be secured to the container border by means of pressure fit.

6. Closure for tubular containers, according to claims 1 and 4, characterized in that the channeled hoop (20) is secured to the container border by means of conventional fastening devices, such as a series of staples (24).

7. Closure for tubular containers, according to claim 1, characterized in that the lid outer radial flange (5) is provided with an extended lug (8) forming a pull handle to enhance the lid removal.

8. Closure for tubular containers, according to claims 1 and 4, characterized in that the edge (22) of the hoop inner face forms an inclined surface in the manner of a saw tooth which is complementary to the rim (6) of the lid (1) which fits under pressure with the said edge.

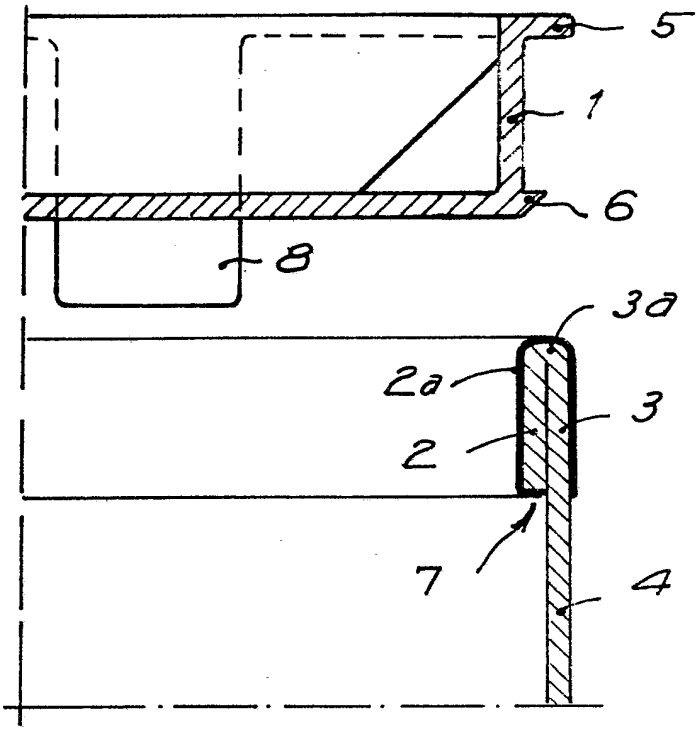
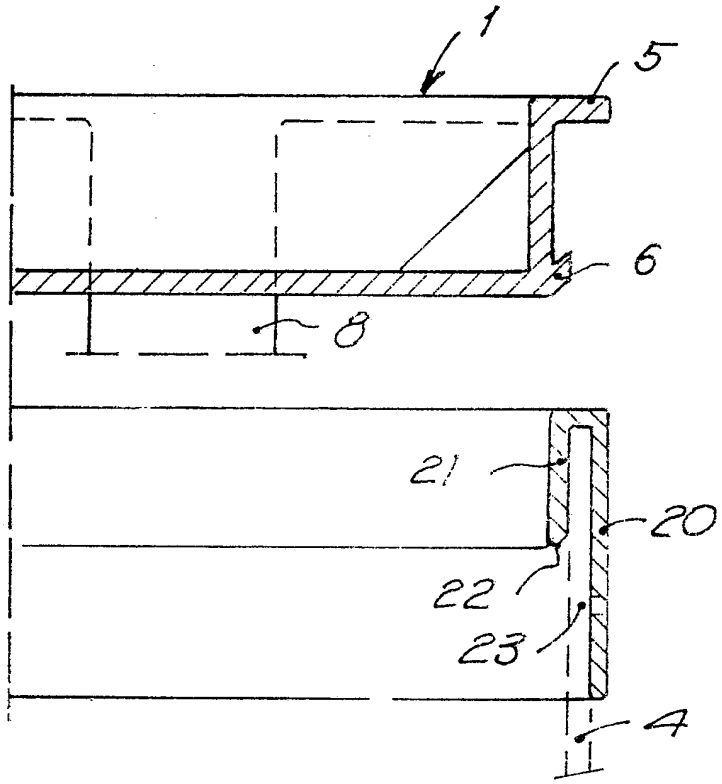


FIG. 1

FIG. 2



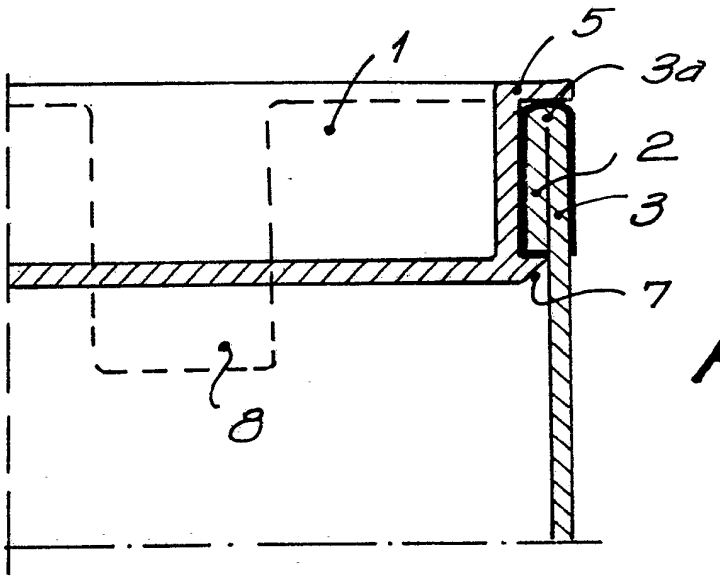
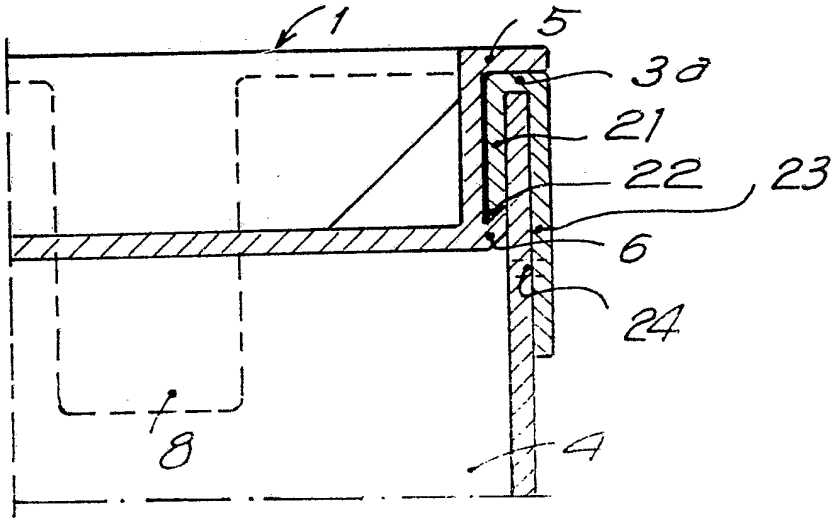


FIG. 3

FIG. 4



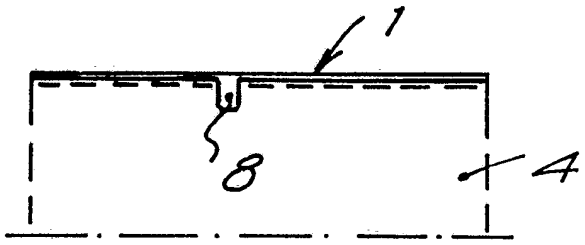


FIG.5

FIG.6

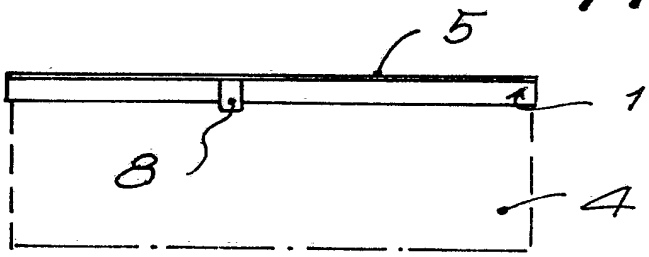


FIG.7